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Listing of Claims:

1. (Currently amended) A gaming system comprising:

a plurality of devices to be individually accessed;

a host controller having a data out terminal a power terminal and a common terminal;

a plurality of local controllers each having a data in terminal, a data out terminal, a power terminal, a common terminal and plural device terminals,

the controllers being interconnected with one another by no more than four lines including at least a data line, a power line[,] and a common line ~~and a return line~~,

the controllers being interconnected in a unidirectional communication string such that the data line interconnects the data out terminal of the host controller with the data in terminal of a first local controller and connects the data in terminal of each of the other local controllers to the data out terminal of the preceding local controller in the string[;],

~~the return line interconnecting all of the local controllers with the host controller,~~

each local controller having its device terminals respectively connected to individual ones of the devices;

the power line interconnecting the power terminals of the host controller and all of the local controllers; and

the common line interconnecting the common terminals of the host controller and all of the local controllers.

2. (Original) The gaming system of claim 1, wherein the devices include optical devices.

3. (Original) The gaming system of claim 2, wherein each of the optical devices is an LED.

4. (Original) The gaming system of claim 1, wherein each of the local controllers is a microcontroller.

5. (Currently amended) A gaming system comprising:

a plurality of devices to be individually accessed;

a host controller having a data out terminal, a data in terminal, a power terminal and a common terminal;

a plurality of local controllers each having a data in terminal, a data out terminal, a power terminal, a common terminal and plural device terminals,

the controllers being interconnected with one another by no more than four lines including a data line, a power line, a common line and a return line,

the controllers being interconnected in a unidirectional communication string such that the data line interconnects the data out terminal of the host controller with the data in terminal of a first local controller and connects the data in terminal of each of the other local controllers to the data out terminal of the preceding local controller in the string and,

the return line interconnecting all of the local controllers with the host controller and being connected to the data out terminal of the last local controller in the string and to the data in terminal of the host controller,

each local controller having its device terminals respectively connected to individual ones of the devices;

the power line interconnecting the power terminals of the host controller and all of the local controllers; and

the common line interconnecting the common terminals of the host controller and all of the local controllers.

6. (Previously presented) The gaming system of claim 5, wherein at least one of the devices is a device having states which are to be detected.

7. (Original) The gaming system of claim 6, wherein the at least one of the devices is a switch.

8. (Previously presented) The gaming system of claim 1, wherein the host controller includes means for producing at its data out terminal an output signal comprising a serial digital data stream directed to all of the local controllers.

9. (Original) The gaming system of claim 8, wherein the devices include at least one device having states which are to be controlled, the output signal including data for controlling states of the at least one device.

10. (Previously Presented) The gaming system of claim 9, wherein at least one device is an LED.

11. (Previously presented) The gaming system of claim 8, wherein the devices include switches and LEDs, the output signal including data bits for causing the local controllers to record the states of the switches and data bits for causing the local controllers to control the states of the LEDs.

12. (Original) The gaming system of claim 1, wherein all of the devices are associated with a single gaming machine.

13. (Currently amended) A gaming system comprising:

a plurality of devices to be individually accessed, arranged in a unidirectional string of N nodes having first and second spaced ends, with each node including up to M of the devices, wherein M and N are whole numbers greater than one;

a host controller directly connected to only the first end of the string and having a data out terminal;

a plurality of local controllers respectively associated with the nodes,

each local controller having a data in terminal and a data out terminal and including a M-bit shift register with the register positions respectively connected to device output terminals to which the devices of the associated node may respectively be connected;

the data out terminal of the host controller being connected to the data in terminal of a first node and the data in terminal of each of the other nodes being connected to the data out terminal of the preceding node in the string so that the string of nodes provides a (MxN)-bit shift register;

the host controller producing at its data out terminal an output signal comprising a serial digital data stream including MxN bits followed by a strobe indicator so that the MxN bits are sequentially loaded into and respectively fill the positions of the (MxN)-bit register;

each local controller being responsive to the strobe indicator for utilizing the contents of its M-bit shift register for accessing the associated devices.

14. (Original) The gaming system of claim 13, wherein each of the local controllers is a microcontroller.

15. (Previously presented) The gaming system of claim 14, wherein M is 4.

16. (Original) The gaming system of claim 13, wherein the serial digital data stream comprises binary data.

17. (Original) The gaming system of claim 13, wherein the devices include at least one device having states which are to be controlled, each local controller being responsive to the strobe indicator for latching the contents of its register to those of its device output terminals connected to the at least one device for controlling states of at the least one device.

18. (Original) The gaming system of claim 17, wherein the at least one device is an LED.

19. (Original) The gaming system of claim 13, wherein the devices include at least one device having states which are to be recorded, each local controller being responsive to the strobe indicator, for each register position connected to the at least one device, for loading into that register position a bit indicative of the current state of the at least one device.

20. (Original) The gaming system of claim 19, wherein the at least one device is a switch.

21. (Previously presented) The gaming system of claim 13, wherein the output signal is comprised of bytes each having at least one M-bit segment.

22. (Previously presented) The gaming system of claim 21, wherein consecutive M-bit segments of a byte respectively address consecutive nodes.

23. (Original) The gaming system of claim 13, wherein all of the devices are associated with a single gaming machine.

24. (Currently amended) A gaming system comprising:

a plurality of devices to be individually accessed including one or more first devices to be sensed and one or more second devices to be controlled, the devices being arranged in a unidirectional string of N nodes having first and second spaced ends, with each node including up to M of the devices, wherein M and N are whole numbers greater than one;

a host controller directly connected to only the first end of the string and having a data out terminal and a data in terminal;

a plurality of local controllers respectively associated with the nodes,

each local controller having a data in terminal and a data out terminal and including a M-bit shift register with the register positions respectively connected to device output terminals to which the devices of the associated node may respectively be connected;

the data out terminal of the host controller being connected to the data in terminal of a first node and the data in terminal of each of the other nodes being connected to the data out terminal of the preceding node in the string so that the string of nodes provides a (MxN)-bit shift register, and the data out terminal of a last node being connected to only the data in terminal of the host controller;

the host controller producing at its data out terminal an output signal comprising a serial digital data stream including MxN bits followed by a strobe indicator so that the MxN bits are sequentially loaded into and respectively fill the positions of the (MxN)-bit register,

each local controller being responsive to the strobe indicator for: (a) for each of its register positions connected to a first device, loading into that register position a bit indicative of the current state of the first device; and (b) for each of its register positions connected to a second device, latching the contents of that position to its associated device output terminal for controlling the associated second device.

25. (Original) The gaming system of claim 24, wherein each of the local controllers is a microcontroller.

26. (Original) The gaming system of claim 25, wherein N is 4.

27. (Original) The gaming system of claim 24, wherein the output signal comprises binary data.

28. (Original) The gaming system of claim 24, wherein each of the first devices is a switch and each of the second devices is an LED.

29. (Original) The gaming system of claim 24, wherein the contents of the (MxN)-bit register is returned to the data in terminal of the host controller in response to the loading into the (MxN)-bit register of an output signal from the host controller.

30. (Original) The gaming system of claim 24 wherein all of the devices are associated with a single gaming machine.

31. (Currently amended) A method for individually accessing each of a plurality of devices in a gaming system comprising:

grouping the devices into a string of N nodes having first and second spaced ends, with each node including a local controller forming a M-bit shift register and up to M devices respectively connected to device terminals respectively connected to the

register positions of the local controller, wherein M and N are whole numbers greater than one,

connecting the local controllers in series with one another and with a data out terminal of a host controller directly connected to only the first end of the string so that the local controllers cooperate to define an (MxN)-bit shift register,

providing a power line connected to all of the controllers and a common line connected to all of the controllers, and

transmitting unidirectionally from the host controller data out terminal to all of the local controllers a serial digital data message including MxN bits respectively corresponding to the devices for individually controlling the devices so that the MxN bits respectively occupy the MxN positions of the shift register.

32. (Previously presented) The method of claim 31, wherein the data message terminates with a strobe indicator which causes each local controller to access the devices connected thereto in accordance with bits of the data message corresponding to that local controller.

33. (Original) The method of claim 32, wherein the data message is a binary data message.

34. (Original) The method of claim 31, wherein the devices include at least one device having states which are to be sensed, and further comprising sensing the current state of the at least one device, and returning to the host controller from each node a signal indicative of the current state of the at least one device.

35. (Previously presented) The method of claim 34, wherein each digital data message terminates with a strobe indicator, and each local controller responds to the strobe indicator for storing, for each at least one device connected thereto, a data bit corresponding to the current state of the at least one device, the stored bits being shifted from the register in response to a next data message from the host controller.

36. (Original) The method of claim 31, wherein the devices include at least one device having states which are to be controlled, and further comprising controlling the states of the at least one device in response to the data message.